

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte DAG ANDERS BJORNERSTEDT

Appeal No. 2002-1950
Application No. 09/234,514

ON BRIEF

Before FLEMING, RUGGIERO, and BARRY, *Administrative Patent Judges*.
BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL

A patent examiner rejected claims 1, 3-10, 12, 13, 15, 16, 18, 19, 21, 22, and 24-27. The appellant appeals therefrom under 35 U.S.C. § 134(a). We reverse.

BACKGROUND

The invention at issue concerns "transaction management" of a database. Transaction management is used to isolate a transaction involving a database from other actions or events therein and to provide a consistent picture of the data stored in the database. For its part, the invention "is provided for consistent reading of a number of objects (10, 20, 30) within a database," (Spec. at abs.), "in which transactions are

managed by two-phase locking." (*Id.*) A first phase (A) includes requesting access to objects affected by a transaction and locking the objects when the request is granted.

A second phase (B) includes committing the transaction and releasing all locks that were set in the first phase. The work done in a transaction may be a changing action or a non-changing action. For a changing action, the content of an object is changed by writing new content into a new version of the object, where the version of the object existing before the transaction is retained until no further transactions use it. Although all changing actions are done within the first phase, the transaction retains access to the objects after the second phase and performs the largest possible number of non-changing actions in a third phase, after which the transaction closes access to the objects. (*Id.*) Consequently, asserts the appellant, the invention provides "the transaction is provided with a consistent snapshot of effected objects . . . in the database," (*id.*), "therewith enabling the transaction to use the consistent picture of the object[s] for non-changing actions without limiting the transaction with respect to time and without blocking other transactions." (*Id.* at 9.)

A further understanding of the invention can be achieved by reading the following claim.

24. A method of providing consistent reading of a number of objects within a database comprising the steps of:

providing transactions including object-changing actions and/or object non-changing actions, said object changing actions include changing content of an object and/or updating said object by said transaction writing a new content into a new version of said object;

performing a first phase of requesting access to objects affected by a transition, locking said objects after access thereto has been obtained, and performing all object changing actions by said transaction;

performing a second phase of committing said transaction and releasing all locks set in said first phase; and

performing a third phase of retaining a current version of said object prior to said transaction until no further transactions make use of said current version, retaining access for reading concerned object versions, carrying out a largest possible number of non-changing actions by the transition, and closing access to said objects after performing said non-changing actions.

Claims 1, 4-10, 13, 16, 19, 22, 24-25, and 27 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,280,612 ("Lorie"). Claims 3, 12, 15, 18, 21, and 26 stand rejected under § 103(a) as obvious over Lorie in view of U.S. Patent No. 6,026,401 ("Brealey").

OPINION

Rather than reiterate the positions of the examiner or the appellant *in toto*, we address the main point of contention therebetween. The examiner asserts, "Lorie discloses performing a query after an updating transaction (lines 3-7 in col. 5)." (Examiner's Answer at 7.) He opines that "after the update, the same transaction may

access the object for reading data of the object. This also teaches the access to the object is not closed after the update." (*Id.*) The appellant argues, "[n]othing in *Lorie et al.* shows, teaches or suggests that a transaction retains access for reading concerned object versions *after* a second phase (i.e., after locks are released). . . ." (Appeal Br. at 9.)

"Analysis begins with a key legal question -- *what* is the invention *claimed*?" *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). In answering the question, "the Board must give claims their broadest reasonable construction. . . ." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1668 (Fed. Cir. 2000).

Here, independent claim 1 specifies in pertinent part the following limitations:

database transactions are managed by locking in two phases, wherein a first phase includes a request for access to objects affected by said transaction and locking of said objects after access thereto has been obtained, wherein a second phase includes committing said transaction, and wherein all locks set in said first phase are released, . . . characterised [sic] in that said transaction retains said access for reading concerned object versions after said second phase. . . .

Similarly, independent claim 24 specifies in pertinent part the following limitations:

performing a first phase of requesting access to objects affected by a transition, locking said objects after access thereto has been obtained, and performing all object changing actions by said transaction; performing a second phase of committing said transaction and releasing all locks set

in said first phase; and performing a third phase of . . . retaining access for reading concerned object versions. . . .

Giving the independent claims their broadest, reasonable construction, the limitations require a transaction to retain access to objects for reading object versions after releasing locks on the objects.

"Having construed the claim limitations at issue, we now compare the claims to the prior art to determine if the prior art anticipates those claims." *In re Cruciferous Sprout Litigation*, 64 USPQ2d 1202, 1206 (Fed. Cir. 2002). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (citing *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 715, 223 USPQ 1264, 1270 (Fed. Cir. 1984); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548, 220 USPQ 193, 198 (Fed. Cir. 1983); *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771, 218 USPQ 781, 789 (Fed. Cir. 1983)). "[A]bsence from the reference of any claimed element negates anticipation." *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1571, 230 USPQ 81, 84 (Fed. Cir. 1986).

Here, the passage of Lorie cited by the examiner mentions that "when a read-only query must access the most recent database version, it may be relabeled and

restarted as an updating transaction and thereby acquire the necessary read locks on all data." Col. 5, ll. 3-7. The examiner fails to show that the reference's relabeled updating transaction, however, retains access to the most recent database version for reading the version **after** releasing its read locks. The absence of the aforementioned showing negates anticipation. Therefore, we reverse the anticipation rejection of claim 1; of claims 4-10, 13, 16, 19, 22, which depend therefrom; of claim 24; and of claims 25 and 27, which depend therefrom.

"In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993)(citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)). "A *prima facie* case of obviousness is established when the teachings from the prior art itself would . . . have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

Here, the examiner fails to allege, let alone show, that the addition of Brealey cures the aforementioned deficiency of Lorie. Absent a teaching or suggestion of a transaction retaining access to objects for reading object versions after releasing locks

on the objects, the examiner fails to present a *prima facie* case of obviousness.

Therefore, we reverse the obviousness rejection of claims 3, 12, 15, 18, 21, and 26.

CONCLUSION

In summary, the rejection of claims 1, 4-10, 13, 16, 19, 22, 24-25, and 27 under § 102(b) and the rejection of claims 3, 12, 15, 18, 21, and 26 under § 103(a) are reversed.

REVERSED

MICHAEL R. FLEMING
Administrative Patent Judge

JOSEPH F. RUGGIERO
Administrative Patent Judge

LANCE LEONARD BARRY
Administrative Patent Judge

)
)
)
)
)
) BOARD OF PATENT
) APPEALS
) AND
) INTERFERENCES
)
)
)
)
)

Appeal No. 2002-1950
Application No. 09/234,514

Page 9

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

APPEAL NO. 2002-1950 - JUDGE BARRY
APPLICATION NO. 09/234,514

APJ BARRY - **2 copies**

APJ FLEMING

APJ RUGGIERO

After signing, return to APJ Barry for disk.

After APJ Barry provides disk, forward to Team 3 for
entering changes and mailing.

Prepared By: APJ BARRY

DRAFT SUBMITTED: 24 Sep 03

FINAL TYPED:

Team 3:

I typed all of this opinion.

Please proofread spelling, cites, and quotes. Mark your proposed changes on the opinion, but do NOT change matters of form or style. I will include the diskette with the signed copy so that you can make all changes before mailing.

For any additional reference provided, please prepare PTO 892 and include copy of references

Thanks, Judge Barry